

REMARKS

Claims 1-24 remain in the application. Claims 3, 6, 9, 10, 13, 16 and 21-24 have been allowed.

Claims 1, 2, 4, 5, 7, 8, 11, 12, 14, 15, 17, 18, 19 and 20 were rejected under 35 USC 102(e) as being anticipated by Saitho. Amended claim 1 is distinguished over Saitho by reciting:

"the first and second components having a height into the head assembly which is measured from a centerline that is perpendicular to said head surface;

each of the first and second components being located along said centerline so that the centerline bisects each of the first and second components with the second component being an extension of the first component into the head assembly along the centerline;"

This structure is shown in Exhibits A and B which are marked up copies of Figs. 15-20 of Applicants' drawings. In these Exhibits the first and second components 202 and 204 have a height into the head assembly which is measured from a centerline CL that is perpendicular to the head surface (ABS) with each of the first and second components 202 and 204 being located along the centerline CL so that the centerline bisects each of the first and second components 202 and 204 with the second component 204 being an extension of the first component 202 into the head assembly along the centerline CL. In contrast, as shown in Fig. 2 of Saitho, the first and second components are not located along a centerline with the centerline bisecting each of the first and second components, nor is the second component an extension of the first component into the head assembly along the centerline. Because of the opening in the second component along the centerline, defined by the Applicants, Saitho will not be able to obtain the frequency dependent variable throat height obtained by the Applicants. This function is described in Applicants' specification from page 4, line 25 to page 5, line 20 which state:

" . . . In the invention the pole tip portion of the first pole piece is configured with first and second components wherein the first component forms a portion of the ABS and the second component is recessed from the ABS and is magnetically connected to the first component. The second component has a width that is less than a width of the first component wherein the widths are parallel to the ABS and parallel to major thin film planes of the layers of the sensor. Accordingly, the second component is constricted with respect to the first component and has a higher efficiency roll-off than the first component, which means the flux carrying efficiency of the second component decreases as the write signal frequency increases. It can be assumed that the first component has a length into the head of 0.5 μm and the second component, which is an extension of the first component into the head, has a length of 1.0 μm which gives a total throat height of 1.5 μm . Assuming that the write signal frequency is high, the permeability of the second component degrades and is less capable of carrying flux to the write gap or shunting flux to the second pole piece layer. Accordingly, the effective throat height is 0.5 μm and since the first component is designed to carry the desired high write signal frequency the head will write well into the track being written without unacceptable erase bands and adjacent track interference on each side of the track being written. When the write signal frequency becomes low the permeability of the second component is high and the effective throat height is 1.5 μm . In this mode, more flux is shunted between the second component and the second pole piece so as to prevent an over-amount of flux at the write gap to prevent the aforementioned unacceptable erase band and adjacent track interference. Accordingly, with the present invention the strength of the field signals being written into the track of the rotating magnetic disk is substantially constant throughout the operating frequency range, without the problem of unacceptable erase bands and adjacent track interference on each side of the track being written."

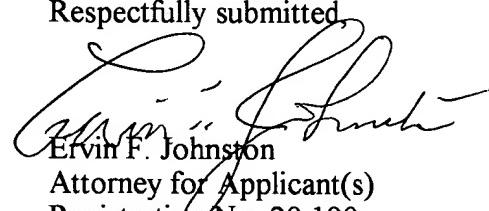
Independent claims 7, 11, 17 and 19 recite similar limitations to claim 1 and are considered to be patentable over Saitho for the same reasons as given in support for claim 1. Dependent claims 2, 4, 5, 12, 14, 15, 18 and 20 are considered to be patentable over Saitho for the same reasons as given in support for their parent claims.

The undersigned has a new telephone number which is **808-661-1197**.

Should the Examiner have any questions regarding this document he is respectfully requested to contact the undersigned.

Respectfully submitted,

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